

**Department of Agriculture - Integrated Pest Management**  
**Alignment to *Maine Learning Results: Parameters for Essential Instruction and Common Core Standards***

ELA = English Language Arts, HE/PE = Health Education and Physical Education, MA = Mathematics, SCI = Science, SS = Social Studies, VPA = Visual and Performing Arts,

\*\* Alignment possible only if lesson extension is done.

Lesson	IPM Grade/ Grade Span	MLR Grade/ Grade Span	Maine Learning Results	Common Core Standards for English and Mathematics
<b>Chapter3: Synthetic Organic Chemicals: Plastics</b>	Grades 11-12	9-Diploma	<p>HE/PE A. Health Concepts</p> <p>A4. Environment and Personal Health - Students determine the interrelationship between the environment and other factors and personal health.</p> <p>a. Analyze how environment and personal health are interrelated.</p> <p>ELA - B. Writing</p> <p>B3. Students write academic essays that structure ideas and arguments in a sustained and logical fashion.</p> <p>a. Explain and evaluate information from reading, listening, or viewing.</p> <p>b. Write thesis-driven essays that build a logical argument and support assertions with examples and evidence that are accurate, credible, and relevant.</p> <p>C. Research</p> <p>C1. Students develop research questions and modify them as necessary to elicit, present, and critique evidence from a variety of primary and secondary sources following the conventions of documentation.</p> <p>a. Select and apply research methods that are appropriate for the purpose of the inquiry.</p> <p>b. Make judgments about conflicting findings from different sources, incorporating findings from</p> <p>c. Synthesize information from varied sources and/or data gathered from fieldwork and interviews.</p>	<p><b>ELA - Reading Standards for Literacy in Science and Technical Subjects</b></p> <p>2. Determine the central ideas or conclusions of a text; summarize complex concepts, processes, or information presented in a text by paraphrasing them in simpler but still accurate terms.</p> <p>7. Integrate and evaluate multiple sources of information presented in diverse formats and media (e.g., quantitative data, video, multimedia) in order to address a question or solve a problem.</p> <p>9. Synthesize information from a range of sources(e.g., texts, experiments, simulations) into a coherent understanding of a process, phenomenon, or concept, resolving conflicting information when possible.</p> <p><b>Writing Standards for Literacy in History/Social Studies, Science, and Technical Subjects</b></p> <p>2. Write informative/explanatory texts, including the narration of historical events, scientific procedures/ experiments, or technical processes.</p>

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<b>Chapter3: Synthetic Organic Chemicals: Plastics   <i>Cont.</i></b>			<div>d. Utilize media relevant to audience and purpose that extend and support oral, written, and visual communication.</div> <div>e. Create and present a coherent set of findings that integrates paraphrasing, quotations , and proper citation. Access and present information ethically and legally.</div> <div>E. Listening &amp; Speaking</div> <div>E2. Students determine speaking strategies for formal and informal discussions, debates, or presentations appropriate to the audience and purpose.</div> <div><div>a. Choose and present appropriate information logically and ethically.</div><div>d. Select appropriate media, relevant to audience and purpose, to extend and support oral, written and visual communication.</div></div> <div>SCI - A1. Systems</div> <div>A1. Students apply an understanding of systems to explain and analyze man-made and natural phenomena</div> <div><div>** b. Explain and provide examples that illustrate how it may not always be possible to predict the impact of changing some part of a man-made or natural system.</div></div> <div>(**Extension: Explain the difficulty in predicting the effect of plastic in the environment.)</div>	<div>a. Introduce a topic and organize complex ideas, concepts, and information so that each new element builds on that which precedes it to create a unified whole; include formatting (e.g., headings), graphics (e.g., figures, tables), and multimedia when useful to aiding comprehension.</div> <div>b. Develop the topic thoroughly by selecting the most significant and relevant facts, extended definitions, concrete details, quotations, or other information and examples appropriate to the audience's knowledge of the topic.</div> <div>e. Provide a concluding statement or section that follows from and supports the information or explanation provided (e.g., articulating implications or the significance of the topic).</div> <div>4. Produce clear and coherent writing in which the development, organization, and style are appropriate to task, purpose, and audience.</div> <div>7. Conduct short as well as more sustained research projects to answer a question (including a self-generated question) or solve a problem; narrow or broaden the inquiry when appropriate; synthesize multiple sources on the subject, demonstrating understanding of the subject under investigation.</div> <div>9. Draw evidence from informational texts to support analysis, reflection, and research.</div>
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<b>Chapter3: Synthetic Organic Chemicals: Plastics   <i>Cont.</i></b>			<div>C. The Scientific and Technological Enterprise</div> <div>C2. Students explain how the relationship between scientific inquiry and technological design influences the advancement of ideas, products, and systems.<div>c. Provide examples that illustrate how technological solutions to problems sometimes lead to new problems or new fields of inquiry.</div></div> <div>C3. Students describe the role of science and technology creating and solving contemporary issues and challenges.</div>	<b>Speaking &amp; Listening:</b> <div>4. Present information, findings, and supporting evidence, conveying a clear and distinct perspective, such that listeners can follow the line of reasoning, alternative or opposing perspectives are addressed, and the organization, development, substance, and style are appropriate to purpose, audience, and a range or formal and informal tasks.</div> <div>5. Make strategic use of digital media (e.g., textual, graphical, audio, visual, and interactive elements) in</div>
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